

PLASMA ENHANCED LINER

ABSTRACT

A method and structure for forming a refractory metal liner, includes depositing a layer of refractory metal on a first conductive layer, at least half of the depositing being carried out in the presence of an amount of passivating agent that is sufficient to impede subsequent reaction of at least a top half of the layer of refractory metal with the first conductive layer and is less than an amount of passivating agent necessary to form a stoichiometric refractory metal with the passivating agent, and annealing the refractory metal and the first conductive layer in a first element ambient, thereby forming a stoichiometric refractory metal with the first element in at least a portion of the top half of the layer of refractory metal.